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Two Skink Lizards Newly Recorded From Tasmania

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ABSTRACT

Rhodona bougainvillii Gray, and *Leiolopisma delicata* De Vis, are recorded from Tasmania for the first time. The extent of local distribution is given, measurements of five specimens of *R. bougainvillii* and nine specimens of *L. delicata* are tabulated and observations on their Tasmanian distribution, habitat, behaviour, breeding and food are recorded.

INTRODUCTION

Until 1962 only eight lizard species were recognised as occurring in Tasmania. Concentrated collecting has since revealed the presence of two additional species, *Rhodona bougainvillii* and *Leiopisma delicata*.

Specimens of *R. bougainvillii* were sent to Mr. A. J. Coventry of the National Museum of Victoria, Melbourne, for comparison with specimens from the Australian mainland.

Specimens of *L. delicata* were sent to Dr. J. L. Hickman, of the University of Tasmania, Dr. H. G. Cogger, of the Australian Museum, Sydney, and Miss Carina Clarke, of the Sydney University for determination. Miss Clarke confirmed Dr. Cogger's opinion that they are *L. delicata* (Clarke, in press).

A brief account of these two species is given below.

MATERIAL AND METHOD

This record is based on the collection and examination of 15 specimens of *R. bougainvillii* and 41 specimens of *L. delicata*. In addition 11 eggs and 40 hatched shells of *L. delicata* have been studied.

Observations were also made on numerous individuals of *L. delicata* kept in captivity for periods up to three months.

Measurements of ovaries were taken from alcohol preserved specimens and those of eggs were made on fresh material.

Measurements of lizards were made on specimens preserved in 70% alcohol and were taken as follows:

Total length — Snout tip to tail tip.

Tail — Posterior edge of anal flap to tail tip.

Snout to ear — Snout tip to centre of ear opening.

Fore-limb — Body to base of claw measured posteriorly.

Hind-limb — Body to base of claw measured posteriorly.

Head — Width at ear.

Body — Width at mid-region.

Rhodona bougainvillii Gray.

LOCAL DISTRIBUTION AND HABITAT.

In correspondence with Mr. A. J. Coventry of the National Museum of Victoria I was informed that the Museum's register shows that, in 1933, one specimen of *R. bougainvillii* was taken by Mr. D. J. Mahoney on Swan Island, twenty miles to the east of Waterhouse Island, off Northern Tasmania.

Worrell (1963) includes Bass Strait Islands in the distribution of *R. bougainvillii* but does not give details.

In the course of two days spent on Waterhouse Island in August 1962 the opportunity was taken to collect representatives of the lizard fauna. The island, situated about two miles from the Tasmanian mainland, is two miles long, half a mile wide and rises to about 100 feet. The soil is sandy with parts of the island being very rocky. Trees are absent and low scrub, tussock grass and rushes cover much of the island. Pasture improvement has taken place in suitable areas.

Sixty-five lizards were collected and found to include five species, namely *Egernia whitii* Lacépède, *Leiopisma metallicum* O'Shaughnessy, *L. ocellatum* Gray, *L. trilineatum* Gray, and *R. bougainvillii*. In every instance *R. bougainvillii* was found half buried in the sandy soil beneath stones. Twelve specimens were collected, all of which were in a semi-torpid condition but became active after handling.

The presence of the species on the off-shore islands indicated the possibility of its occurrence on the adjacent Tasmanian mainland. In June 1964, lizards collected at Cape Portland by Mr. Lance Wilcox included three *R. bougainvillii* thus confirming the earlier suspicion of their presence in north-eastern Tasmania. To date, they have not been collected in Tasmania beyond these limits.

The species is adequately detailed by Waite in "The Reptiles and Amphibians of South Australia" 1929, and the following particulars are given for comparison.

The three specimens collected at Cape Portland were typical of the species and consisted of one adult male (total length: 105 mm.) and two juveniles (total length: each 45 mm.). (See Table 1).

REPRODUCTION.

The ovaries of *R. bougainvillii* collected at Waterhouse Island showed no evidence that maturation of the ova had begun. However those of the other species collected from the island had obviously commenced development.

Table 1. DIMENSIONS OF FIVE *R. BOUGAINVILLII* (in mm.).

Q.V.M. Reg. No.	Waterhouse Island			Cape Portland	
	1964:3:9	1964:3:8	1964:3:7	1964:3:6	1964:3:5
Total length	126	118	62	105	45
Tail	65	64	30	52	20
Snout to ear	7	7	4.8	7	4.7
Fore-limb	7	7	4.5	6.5	3.5
Hind-limb	12	12	7	12	6
Head	5	5	3.2	5	3
Body	6	6	3.2	6	3
Rows of body scales	22	22	22	20	22

Leiopisma delicata De Vis.

LOCAL DISTRIBUTION AND HABITAT.

This lizard was first suspected as being a species new to Tasmania in the spring of 1963 when, upon examination of captive specimens, characteristics were noticed which served to distinguish it from *Leiopisma metallicum* O'Shaughnessy with which it had previously been confused.

Following further collecting in the summer and autumn of 1964 and a re-examination of specimens of *Leiopisma* in the collections of the Queen Victoria Museum, it became obvious that those previously determined as *L. metallicum* included specimens of *L. delicata*.

To date, *L. delicata* has been collected only from northern and north-eastern Tasmania, localities being Gladstone, Moorina, Launceston, Exeter, Deviot, Flowery Gully, Green's Beach and Badger

Head. Throughout this area it is a comparatively common lizard and has been taken in habitats ranging from open sandy heath to pine forest and thick bush. Though it is not suggested that its range is limited to this area it has thus far not been collected from areas beyond these limits. No Tasmanian specimens were located in collections outside the Queen Victoria Museum but it is intended to lodge examples in the Australian Museum, the National Museum of Victoria and the Tasmanian Museum.

When disturbed it readily retreats beneath any available cover and has been found under timber, stones, old iron, cement blocks, dried seaweed and accumulated vegetation. There is no evidence of burrowing apart from the removal of some soil to facilitate its access to a retreat. Though it is an excellent climber in captivity it has not been found to ascend more than a few inches above the ground in its natural habitat.

Table 2. DIMENSIONS OF NINE *L. DELICATA* (in mm.).

Q.V.M. Reg. No.	1964:3:17	1964:3:16	1962:3:10	1964:3:15	1964:3:14	1964:3:13	1964:3:12	1964:3:11	1964:3:10
Sex	♂	♂	♂	♂	♂	♀*	♀	♀	♀
Total length	90	105	105	83	102	76	92	100	50
Tail	56	64	64	51	61	36	55	60	25
Snout to ear	7	7.5	7.8	6.5	7.5	7.5	7	7.5	5.4
Fore-limb	7.5	10	9.5	8.5	9.5	9.5	9.5	8.5	6
Hind-limb	11.5	13.5	13	11	12.5	12.5	11.5	12.5	7.5
Head	5	5.5	5	4.6	5.6	5.7	5	5.5	4.5
Body	6	6.5	6	5.5	6	6.5	5	8	4
Rows of body scales	27	26	26	27	28	28	26	26	26

(* Regenerated Tail).

Table 3. RANGE IN NUMBER OF SUBDIGITAL LAMELLAE OF NINE *L. DELICATA*.

Digit	Number of digital lamellae	
	Fore-Limb	Hind-Limb
I	5 - 7	6 - 9
II	8 - 10	10 - 14
III	9 - 14	13 - 20
IV	11 - 16	16 - 25
V	7 - 10	11 - 15

BREEDING.

A specimen (with head and body length of 41 mm.) collected at Green's Beach on 15/9/63 was found to have two eggs (each 1.7 mm. in diameter) in each oviduct. Another (with head and body length of 38 mm.) collected at Exeter on 1/1/62 had one egg (5.5 mm. x 4.5 mm.) in each oviduct.

From December to March eggs, at various stages of development, have been found in crevices in the dry ground and in chambers beneath stones, wood, and loose earth. Eggs are oval in shape with a milky white soft skin-like covering. A lizard collected on 30/11/63 and showing obvious signs of pregnancy was kept in captivity, and produced four eggs on 4/12/63. These eggs averaged 7.5 mm. x 5 mm.

A set from Green's Beach on the point of hatching averaged 11 mm. x 6 mm. The size difference between newly laid eggs and eggs on the point of hatching indicates fluid assimilation with volume increase. A similar development was noted by Mitchell in his observations on *Leiopisma guichenoti* Dumeril and Bibron (Mitchell, 1959). If the eggs are only partly developed when removed from the cavity of deposition they rapidly dehydrate but, if advanced, they easily hatch. Total length at hatching is 37 mm. to 43 mm. In colour and appearance the young lizard is similar to the adult except for the head which proportionally is slightly larger. Nest chambers from which the young have emerged sometimes contain more than 20 empty and shrivelled shells. This communal breeding habit is closely allied to that of *L. guichenoti*, (Mitchell, 1959), and *Leiopisma trilineatum*, (B. C. Mollison — personal communication).

FOOD.

Examination of the stomach contents has revealed in most instances the remains of insects belonging to the orders HYMENOPTERA and DIPTERA. One specimen collected near the high water mark at Green's Beach was found to have its alimentary canal distended with remains of small crustaceans.

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